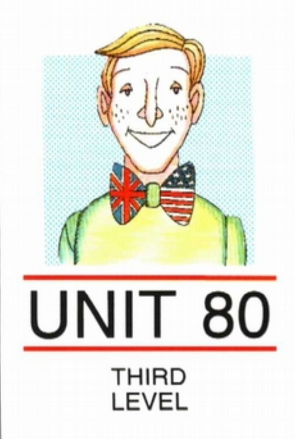
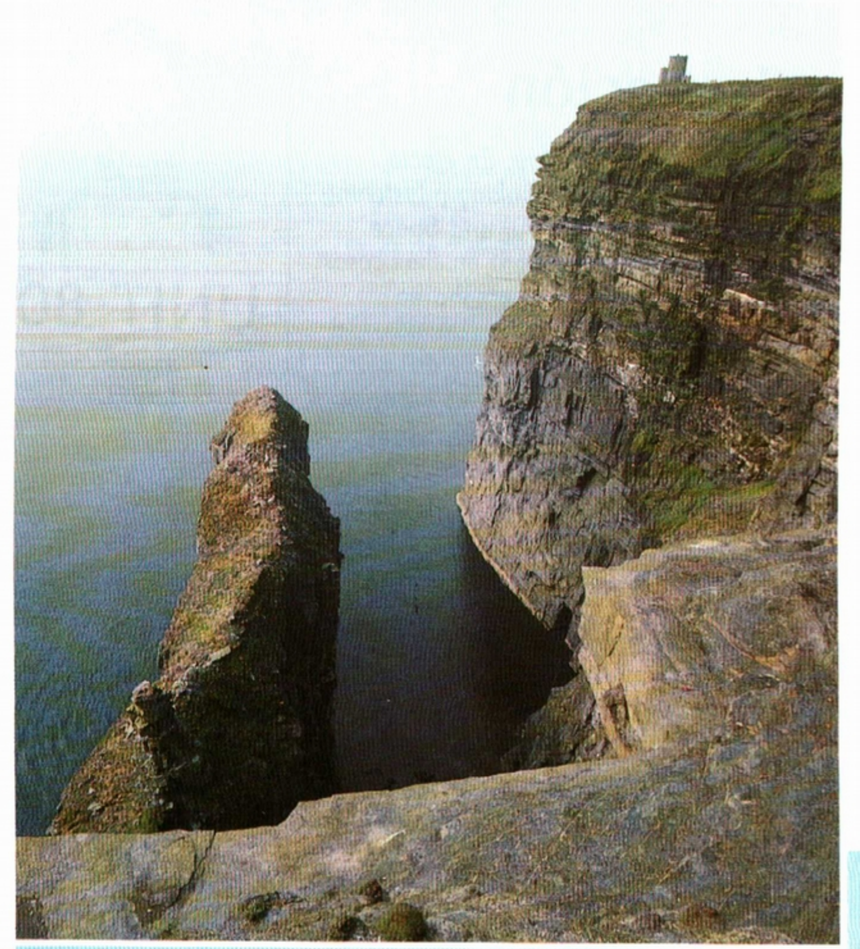
Ciencia y ciencia ficción

Prepárese para aventurarse en una Unidad que está por descubrir. En efecto, los inventos científicos son los protagonistas de las secciones Speaking y Listening. En compañía de cuatro turistas ingleses que visitan el National Air and Space Museum, sección del Museo Smithsonian de Washington, aprenderá muchas cosas acerca del primer vuelo a bordo del famoso Wright Flyer, llevado a cabo en Estados Unidos, en 1903, por los hermanos Orville y Wilbur Wright. Además, se hablará del gran naturalista Charles Darwin y del rechazo, por parte de la comunidad científica de la época, de su teoría de la evolución de las especies. Pero esto no es todo: hay también un espacio reservado a la ciencia ficción. En la sección Conversation se verá catapultado a un mundo realmente fascinante, poblado por científicos locos, criaturas artificiales y monstruos verdes. Durante este improbable viaje tendrá ocasión de examinar en profundidad las oraciones consecutivas, las finales y las construcciones con las locuciones «in case» e «in case of».
Por último, podrá gozar de una lectura verdaderamente estremecedora con el fragmento extraído del célebre «Frankenstein», escrito en 1818 por Mary Shelley.



UNIT 80

THIRD LEVEL



Irlanda, isla de esmeralda

A diferencia de la vecina Gran Bretaña, Irlanda presenta una decidida uniformidad en sus caracteríticas naturales. Ante todo, un sistema de modestos relieves, que se elevan un poco en las proximidades de las costas. La cima más elevada es el Carrauntoohill, que apenas alcanza 1.041 metros de altitud. A lo largo del perímetro de costas rocosas, altas y accidentadas de la vertiente atlántica, se abren profundas ensenadas y fiordos, que hablan de antiguos valles invadidos por el mar. La elevación del nivel del mar, que comenzó hace 10.000 años, es responsable del aislamiento de Irlanda, unida en otro tiempo a Gran Bretaña y con ella al continente europeo. El corazón de la isla fue modelado por fenómenos glaciares que originaron las características colinas morrénicas y los numerosos lagos. En las imágenes, los famosísimos Cliffs of Moher, un breve tramo de la costa noroccidental constituido por acantilados de paredes verticales.



A flying visit to the Smithsonian

One of the most fascinating places to go for anyone who is interested in science and the history of science is to be found in the United States: the Smithsonian Institution. This is made up of a network of fourteen different museums, one of which, the National Air and Space Museum, in Washington D.C., is the setting for our first dialogue. Four English people are being guided around the museum, and when we meet them they are looking at the famous Wright Flyer, the very first aeroplane.

The guide uses a couple of words that you dealt with in the last Unit: **so** and **such**. But if you look closely, you'll find that this time they're usually accompanied by **that**. Why is this? Well, they are still 'intensifiers' in this case, but the addition of **that** makes what is usually called a **clause of consequence** or a **clause of result**.



One day at Kittyhawk

In this dialogue, you'll hear four English people being taken for a guided tour of the National Air and Space Museum in Washington D.C. Notice how the guide uses **so** and **such**:

And this, of course, is the world's first successful aircraft: The famous 'Wright Flyer', with which Orville Wright made the first heavier-than-air flight on December 17th, 1903, at Kittyhawk in North Carolina. ___

Oh, yes. ___

Was this the first aeroplane they ever built? ___

No, they worked very hard for a number of years with a whole series of gliders before they arrived at this design. Their main worry was control and stability. Many of the gliders that had been built up to that point were so unstable that some of the people who had been experimenting with them actually lost their lives. Wilbur and Orville devoted years to solving the basic problem of aircraft stability, and they encountered enormous problems on the way. ___

How did they solve it in the end? ___

Well, they developed a system of wires which the pilot could use to bend wings of the aircraft, controlling it in flight. It was such a successful idea that it was used on all aircraft right up to the beginning of the First World War. You can see the wires here, going from the space where the pilot lay to the edges of the wings. ___

How long did the flight last? ___

Not very long at all. In fact, it was so short, the photographer hardly had time to take that famous photograph. Orville was in the air just 12 seconds. But by 1905, they were making flights that were much longer. Some lasted as long as twenty minutes. They had also learnt how to perform elementary manoeuvres, like banking and rolling. They didn't take out their first patent, however, until 1906. ___

And what was the reaction to all this? ___

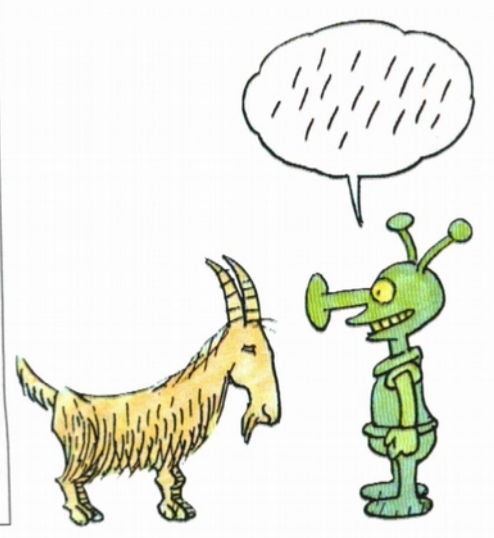
Well, it was rather comical, actually. You see, nobody wanted to believe them. The British felt they knew so much about aeronautics that nobody could beat them into the air. And the French called it 'le bluff américain'. In 1908, however, Wilbur took his 'model A' to Europe and gave a demonstration. Everybody was amazed, and many people were very angry that two Americans were the first people to fly! ___

What is a **clause of consecuence** exactly? Well, it's a little phrase that introduces an explanation of what the results of something are. Look, for example, at the sentence **It was such a succesfull idea that it was used on all aircraft right up to the beginning of the First World War**.

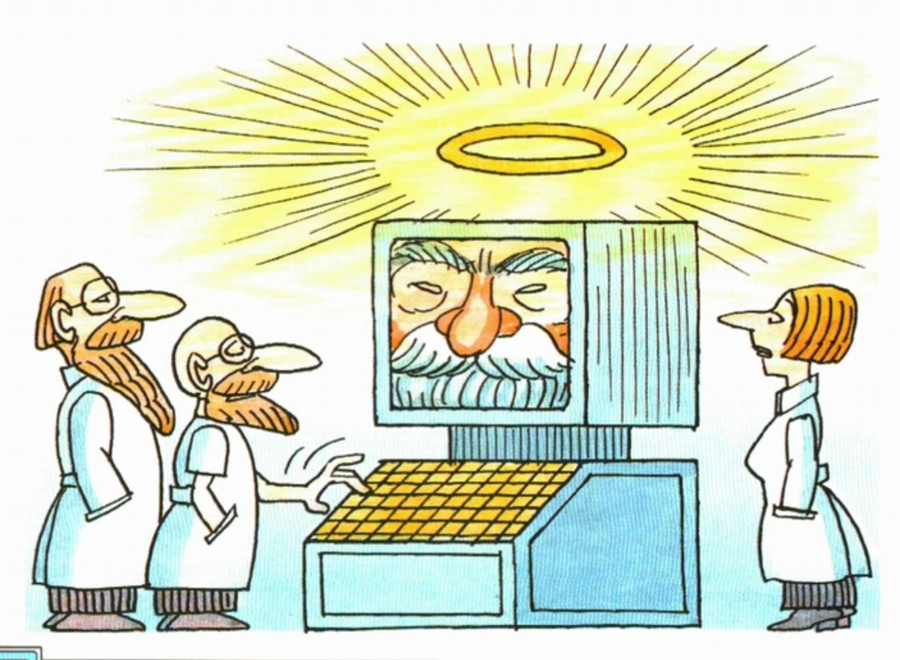
We could paraphrase this sentence like this: **A result of the success of this ideas was that it was used on all aircraft right up to the beginning of the First World War.**

There are a number of ways of expressing this idea in English, but the use of so and **such** followed by **that** is without doubt the most common. In colloquial English, **that** is often omitted, just as it is with certain relative clauses. In this case, you may well find a comma after the adjective or noun that follows **so** or **such**: **In fact, it was so short, the photographer hardly had time to take that famous photograph**. And quite often in spoken English, the person will stress **so** or **such** quite heavily when they aren't followed by **that**.

Remember that you can also use **so** and **such** together with expressions of quantity (**much, many, a lot, a few** and so on) **in clauses of consequence** as well. This is just what the guide does, in fact, towards the end of the dialogue: **The British felt they knew so much about aeronautics that nobody could beat them into the air**. As you may have already guessed, these **clauses of consequence** are quite similar to Spanish. As always, you'll be able to find out more about this and other aspects of these constructions in the GRAMMAR section.



The next stage on our trip



Our trip to the National Air and Space Museum continues with a hall dedicated to space vehicles, including the Apollo 11 Lunar Module (used by the first men on the moon) and a model of th Saturn V rocket. Obviously, the visitors have a lot of questions to ask, and the replies given by the guide highlight another kind of English clause: **clauses of purpose**.

You've already seen some examples of these. In Unit 63, for example, you learnt how to express purpose by using **so as**. And once again, the phrase used by the guide in this dialogue includes **so**. But this time it's followed by **that**: **Rocket engineers design rockets in stages so that each part of the rocket falls away when it becomes empty**. The important thing about this expression is the tense of the verb, and the kind of verb, that accompanies it. When the verb in the main clause of the sentence is in a past tense, **so that** is almost always followed by one of four modal verbs: **should**, **could**, **would** and **might**. The most common is **should**, but **could** is often used to express the idea of ability: **Rocket engineers chose to use liquid hydrogen so that they could reduce the weight of the space vehicle as much as possible**. The modal verb **might**, on the other hand, is very formal, but can be used on some occasions.

When the main verb of the sentence is in the present, present perfect, or refers to the future, however, the situation changes. In this case the expression **so that** is usually followed either by a verb in the present tense, or else by one of the three modal verbs **will**, **can** or **may**. Again, **may** is very formal.

The why and how of rockets

Our four English friends have now moved on to the exhibition of space vehicles, where the guide tries to explain why rockets are made the way they are. Listen carefully to the way he uses **so that**, then repeat:

Here we have some examples of space vehicles. Over there you can see the Apollo 11 Lunar Module. On the left we have a model of the Saturn V rocket, which was used to launch the Apollo missions. ___

Is that the Lunar Module? That little thing on top? ___

Yes, that's right. ___

My God. It's tiny, isn't it? When it's compared to the rest of the rocket, I mean. ___

Yes. The reason, of course, is simple. In order to escape the Earth's gravitational pull, a vehicle has to reach a speed of 22,500 miles per hour. That requires a lot of power, as you can imagine. And that means a lot of fuel. ___

What kind of fuel do rockets use? ___

Usually, they use liquid hydrogen. ___

Can't they use ordinary fuels? ___

No. ___

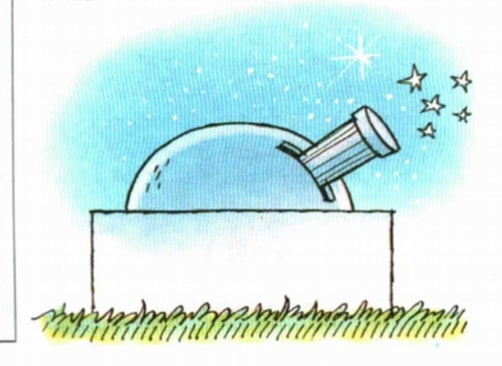
Why's that? ___

Well, it's a problem of weight. You see, when you put a rocket into space, it has to be as light as possible. Ordinary fuels are very heavy, whereas liquid hydrogen is very light. Rocket engineers chose to use liquid hydrogen so that they could reduce the weight of the space vehicle as much as possible. ___

And why are they made in stages? ___

Again, it's a problem of weight. Every pound weight of rocket needs fuel to drive it. Rocket engineers design rockets in stages so that each part of the rocket falls away when it becomes empty. This reduces fuel consumption to a minimum. ___

Oh, I see. ___

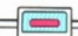


Man, monkey or naturalist?

The United States isn't the only place where scientific history was made, of course. In this dialogue you'll find a situation which is, in some respects, the opposite of the previous two dialogues. Two Americans, Sam and Di, are visiting Down House, the house in Kent where the naturalist Charles Darwin lived. Once again, they are being shown round by a guide, and once again the things the guide says highlight one or two interesting points about the English language.

The first is the expression **such that**, which you can find in the sentence **The controversy was such that Darwin had real problems at times when he appeared in public**. This is another kind of **clause of consecuence**, but it is rather formal. In this case, of course, **such** refers back to **controversy**, and we could paraphrase the first part of the sentence like this: **His ideas were so controversial that Darwin had real problems at times when he appeared in public**.

The second point that is worth looking at is the way **in case** and **in case of** are used. These two expressions don't actually mean the same thing at all. **In case** is used to talk mainly about precautions, that is things which we do in advance to make sure that there won't be any problems later. In the sentence **He knew he had do have as much evidence as he could in case the scientific community should react in a hostile fashion**, for example, the guide wants to point out that Darwin was very careful to provide a lot of evidence for his theories because he didn't want to have problems with the scientific community later on. This expression is quite often followed by the modal verb **should**, especially when the language is fairly formal. **In case of** has a much wider meaning and in many cases can be used to replace **if**. In the sentence **Wallace said that, in case of doubt, the honours should go to Darwin for the discovery** the expression **in case of doubt** can quite easily be substituted by a clause beginning with **if**: **If there shold be any doubt**. As clauses which begin with **in case of** are generally much shorter than clauses beginning with **if**, you quite often find them in instructions, followed by an imperative (**In case of emergency, dial 999**; **In case of fire, do not use the lift**, etc.).



Down at Down House

Two American tourists are visiting Down House, where Charles Darwin lived. Listen and repeat:

And here we have the study, of course. This is the room in which Darwin developed his famous theory of evolution. ___

His theory was quite controversial at the time, wasn't it? ___

Oh, yes. Controversy was such that Darwin had real problems at times when he appeared in public. And one reason Darwin spent so much time studying and writing before he published his theory was that he suspected the kind of reaction it would provoke. He knew he had to have as much evidence as he could in case the scientific community should react in a hostile fashion. And he was right, of course. ___

If I remember well, there was a famous lecture of some kind, wasn't there...? ___

Yes, that's right. It was the annual meeting of the British Association of 1860. It was held at Oxford that year, and one of the speakers was the bishop of Oxford himself, Samuel Wilberforce. Wilberforce attacked Darwin's theory, but he was opposed by Huxley, who was Darwin's friend, and who got the better of him that day. The argument about Darwin's theory was to continue for decades, and in a certain sense is still continuing. ___

Was Darwin the only scientist who was interested in the problem of the evolution at that time? ___

Oh, goodness, no. In fact, one could say that his discoveries were virtually contemporaneous with those of another naturalist and explorer, Alfred Russell Wallace. And there's quite an interesting little story about these two men. Darwin, you see, was very reluctant to publish his theories — perhaps he realized that they would create a lot of controversy. Lyell kept telling him to publish them, however... ___

Who was Lyell? ___

Lyell was a famous Scottish geologist, and a friend of Darwin's. He had also been influential in shaping Darwin's ideas. Anyway, one day Darwin received an essay by Wallace which summed up his own ideas perfectly. ___

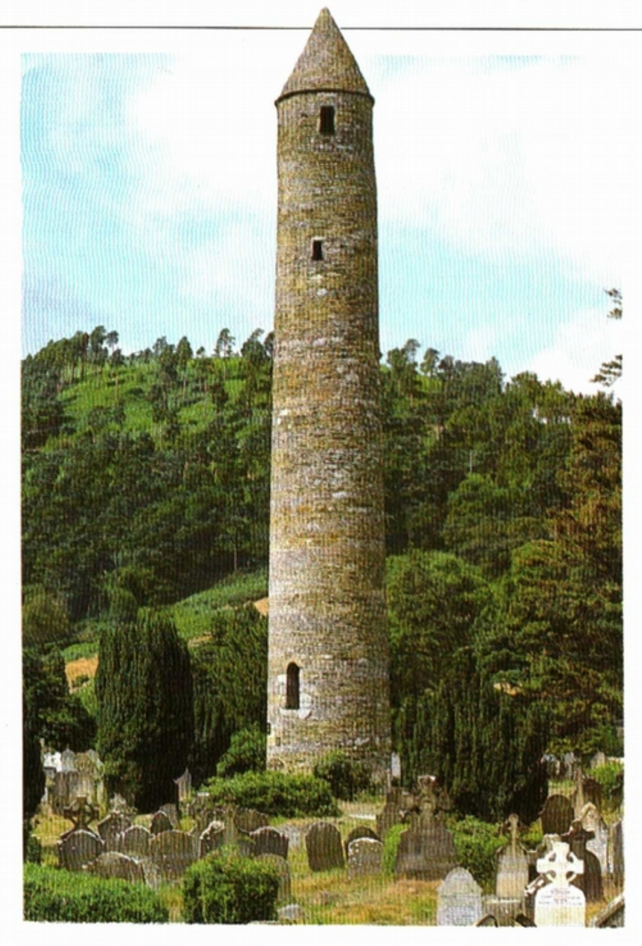
And what happened? ___

Well, Darwin and Wallace decide to read Wallace's essay and a statement by Darwin which explained their ideas together at a meeting of the British Association. And afterwards Wallace said that, in case of doubt, the honours should go to Darwin for the discovery. ___

That was very good of him. Why did he do that? ___

He said that Darwin had collected much more evidence than he had, and that in any case he owed a lot to Darwin's early ideas about evolution. He was right, too. But it seems a shame that almost everybody has forgotten about Wallace while Darwin is famous everywhere. ___

Finally, there is an idiomatic expression which may seem rather strange: **to get the better of someone**. You'll find this in a sentence that appears about halfway through the dialogue, when the guide is describing the famous lecture that took place at Oxford: **Wilberforce attacked Darwin's theory, but he was opposed by Huxley, who was Darwin's friend, and who got the better of him that day**. What he means is that Huxley was able to defeat Wilberforce in the course of the lecture.



El suelo que los romanos no pisaron

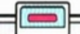
El pueblo irlandés tiene vínculos antiquísimos con pueblos europeos, tal vez de origen ibérico, que habitaron la región hasta la invasión céltica, acaecida en los siglos VIII y VII a.C. A partir de entonces, los celtas o gaelos dieron vida durante muchos siglos a una civilización autónoma, que permaneció ajena incluso a la expansión romana. Pese a los incesantes contactos con el continente, y pese a la larga dependencia de los ingleses, la cultura celta ha marcado profundamente a los irlandeses, que tienen en la lengua gaélica uno de los pilares de su autonomía. En las ilustraciones, Glendalough, el delicioso valle que custodia los restos de un antiguo conjunto monástico del que forma parte una torre redonda del siglo XI (a la izquierda), edificio característico de la primitiva arquitectura irlandesa.





From Mary Shelley to Isaac Asimov

On the way back to London from Down House on the coach, our two American tourists start chatting about science fiction. In the course of their dialogue, however, Sam says something that is rather strange.



You like sci-fi, Di?

After their visit to Down House, the two tourists make their way back to London by coach. On the journey, they start talking about science fiction. Listen and repeat:

That was an interesting place, don't you think? ___

Sure was. I couldn't help thinking about Isaac Asimov while that guy was talking, though. ___

Isaac Asimov? ___

Yes, you know. The sci-fi writer. ___

Oh, yes, that's right. How come? ___

Well, Asimov's stories owe a lot to this idea of evolution, don't you think, Di? ___

I don't know, Sam. I've only ever read one of his stories, but I can't remember which. It was all about robots, though, and some kind of alien life form that had developed into a planet. ___

You don't like sci-fi? ___

Oh, yes, but I have just one or two favourite authors who I stick to, like Frank Herbert, for example. ___

Ah, the guy who wrote Dune, right? ___

Yes, that's right. I've got all his books at home. He's a great writer. ___

You've read all of the Dune books? ___

Yes, that's right. I suppose some of his ideas have something to do with evolution as well, you know. I remember reading... I can't remember exactly where he first mentions it... about the breeding program of those female priests... ___

Oh, yes, that's right... the Reverend Mothers he calls them... they try to control the evolution of the human species, don't they? ___

Well, not the whole of the human species... just the best parts of it. ___

Huh. Pretty frightening, I'd say. ___

Still, I guess you're right. A lot of science fiction deal with aliens and monsters from outer space, which is just another way of looking at evolution gone wrong, I suppose. ___

And you know where it all started, don't you? Frankenstein. You know... man interfering with nature, the search for immortality... all that kind of thing. ___

Yes, you're right, of course. Have you ever read that book, Sam? ___

No, never. But I'd like to. Dick's read it and he says it's completely different from the films. Have you ever read it? ___

Oh, yes. And Dick's right. You should read it sometime, you know... anyone who's interested in sci-fi should. I tell you what. Why don't we pick up a copy in London? ___

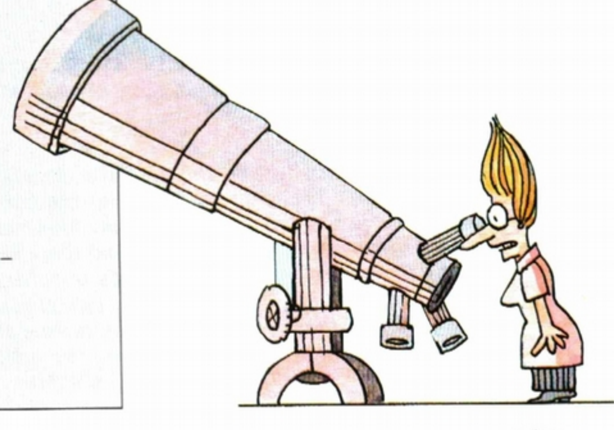
Great idea. It'll give me something to read on the train back to Cambridge. ___

Take a look at his two sentences **You don't like sci-fi?** and **You've read all of the Dune books?** Do you notice anything strange about them? They are both questions, of course, but, oddly, Sam doesn't invert the subject and the auxiliary verb at the beginning. Why is this?

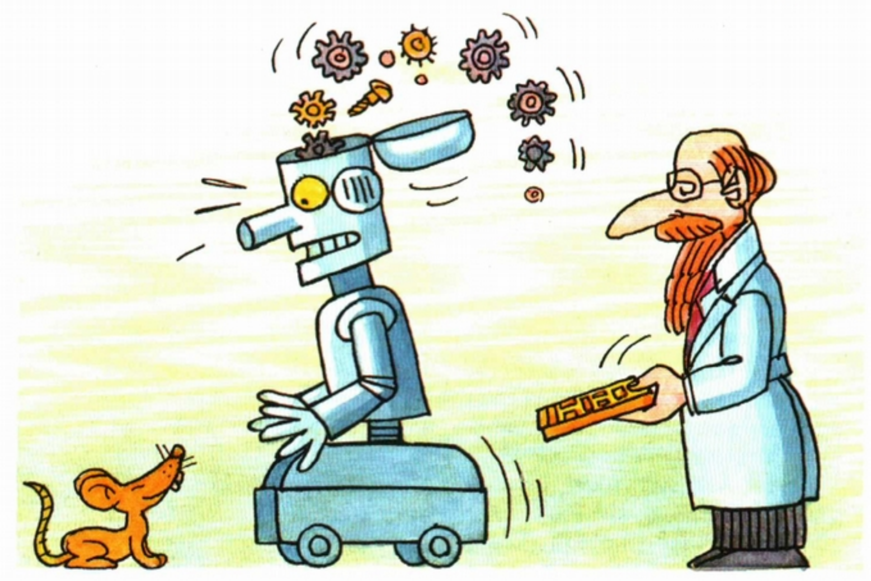
Even though questions are usually formed by inverting the subject and the auxiliary verb (or the verb if it's **to be**), it is possible on occasion to use an ordinary affirmative sentence as a question. This always takes place in very informal situations, is always used with questions that can be answered with yes or no, and usually express a great deal of surprise (as in the case here). Be very careful, however. It's not always easy to know when the context is informal enough to use this kind of sentence, and in any case you have to make sure that the intonation is just right (usually, the rising tune at the end is even more marked than in ordinary questions). If you are in any doubt, always use the normal word order for questions.

Finally, notice a couple of typically American expressions. You'll find the first one in the second sentence: **sure was**. Here, **sure** is used in a very colloquial way, as an adverb (British people rarely use it like this). At the same time, Di omits the subject of the sentence (the phrase should be **It sure was**). Once again, this is because the situation is informal.

The second expression comes later on: **pretty frightening**. Here, **pretty** is no longer used as an adjective, but as an adverb, and its meaning is rather different. Sam uses it to intensify the word that follows: **pretty frightening** means the same as **fairly frightening** or **rather frightening**.



So that you can say it right



As you may have noticed when you were reading through the first two sections and repeating the dialogues recorded, there are two expressions which use the words **so** and **that**. The first, which is a clause of consequence, has to have an adjective or an adverb between **so** and **that**. The second, on the other hand, remains as it is. Apart from this obvious difference, however, there are others, one of which is connected to the intonation which you have to give to these sentences.

Look at the sentence **It was so short that the photographer hardly had time to take that famous photograph**, for example. Here, the sentence is divided into two parts: the first part ends with **short**, and the second part ends with **photograph**. If you listen carefully to sentences like this, in which **so that** is used as a clause of consequence, you'll find that there is a rising tune in the first part of the sentence and a falling tune in the second part.

When **so that** is used to express purpose, however, the sentence is divided up in a different way. In the sentence **Rocket engineers design rockets in stages so that each part of the rocket falls away when it becomes empty**, for example, there is only an interrupted fallin tune, and the point at which the tune is interrupted usually comes after **that**. When the clause with **so that** comes at the beginning of the sentence, the rising tune comes at the end, immediately before the subject of the main clause: **So that we could get to Down House in time, we left very early**.

A guided tour of the Royal Society

In this dialogue, listen carefully to the intonation of the sentences which contain clauses of consequence and clauses of purpose introduced by **so that**:

The Royal College was established so that scientists could meet to discuss their ideas.

When was it established?

In 1660.

Was it succesful?

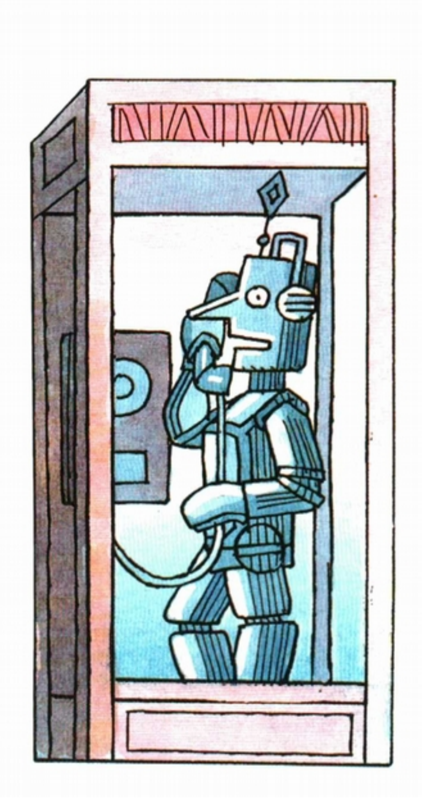
Oh, yes. At the beginning it was so succesful that its membership rose from 41 to over 200 in the 1670's. In the eighteenth century, this number decreased slightly, but by 1800 the number of scientists who were members had increased again to nearly 500.

Who was the first president?

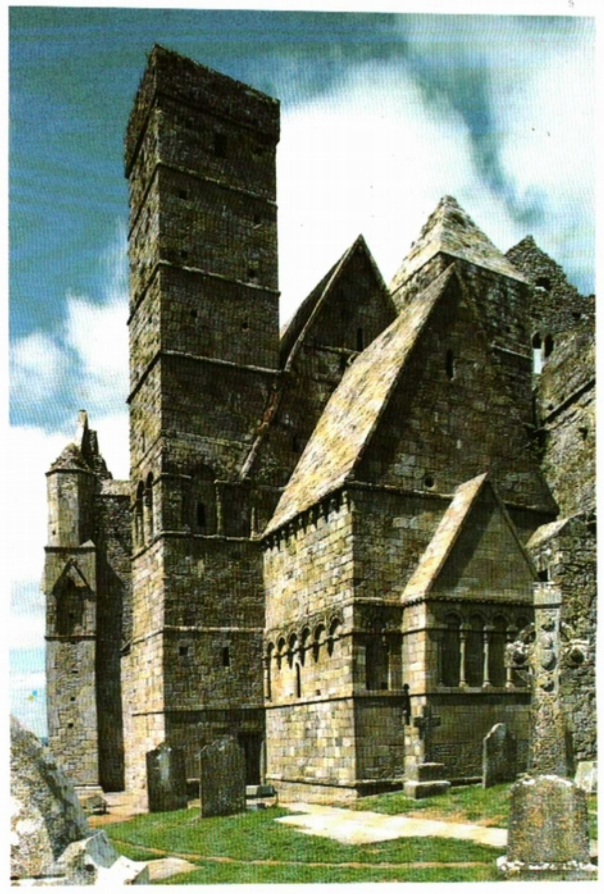
A man called Lord Brouncker. He wasn't a scientist at all, and the Society only elected him so that it could exploit his business contacts with Europe.

Really?

Oh, yes. The Society was, in fact, quite closely involved with business at the beginning. In 1664, for example, it set up eight permanent committees so that it could look more closely into certain areas of scientific enquiry. And there were other men involved who couldn't be described as scientists in the true sense of the word, either. Moray, for example, one of the first members, was some of an interested amateur than anything else, but he was so good at promoting the society that he persuaded the King to give it a royal charter.







Cuando san Patricio convirtió a los celtas

En aquellas tierras en las que nos hubo invasión romana, se produjo muy pronto la pacífica «invasión» del cristianismo: en efecto, Irlanda fue uno de los primeros territorios nórdicos en recibir la evangelización, y se convirtió en centro propulsor de la actividad misionera benedictina en Europa. La conversión de los celtas es mérito de san Patricio, patrón de Irlanda. Siendo joven, fue secuestrado por los piratas y vivió esclavizado en Irlanda. Vuelto a su patria, Bretaña, fue consagrado obispo en el año 431. Un año después recibió como destino precisamente la isla de su cautiverio, donde desarrolló una intensa actividad apostólica durante el resto de su vida. En las fotos superior y lateral, St. Patrick's Rock, en Cashel, un vasto complejo religioso construido sobre una antigua fortaleza. En la foto inferior, Holy Cross Abbey, una abadía cisterciense fundada en 1180 en las proximidades de Cashel.



UNIT 80

Una criatura casi perfecta

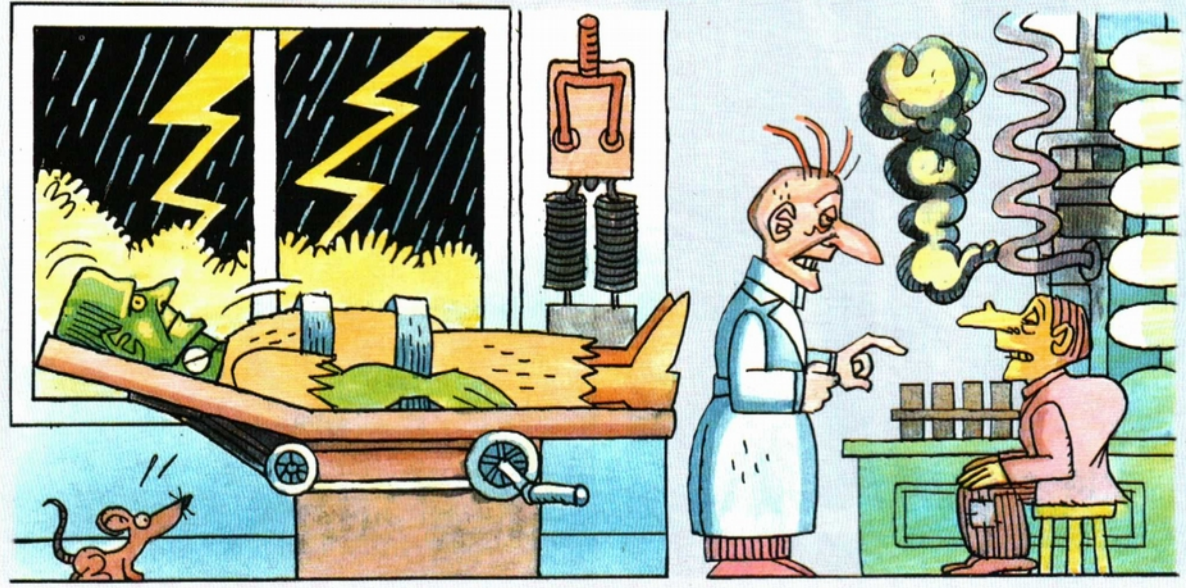
El desafío a la naturaleza mediante la creación de un superhombre y la influencia de la civilización terrestre sobre una cultura alienígena son, sin duda, algunos de los mitos más populares y explotados en las novelas de ciencia ficción. Estos grandes temas, 'condimentados' con una buena dosis de ironía, constituyen los argumentos de las conversaciones que escuchará.

En la primera, un científico crea un ser que, según sus propósitos, debería tener cualidades excepcionales y el cerebro de un genio; se encuentra, sin embargo, con



DO-IT-YOURSELF

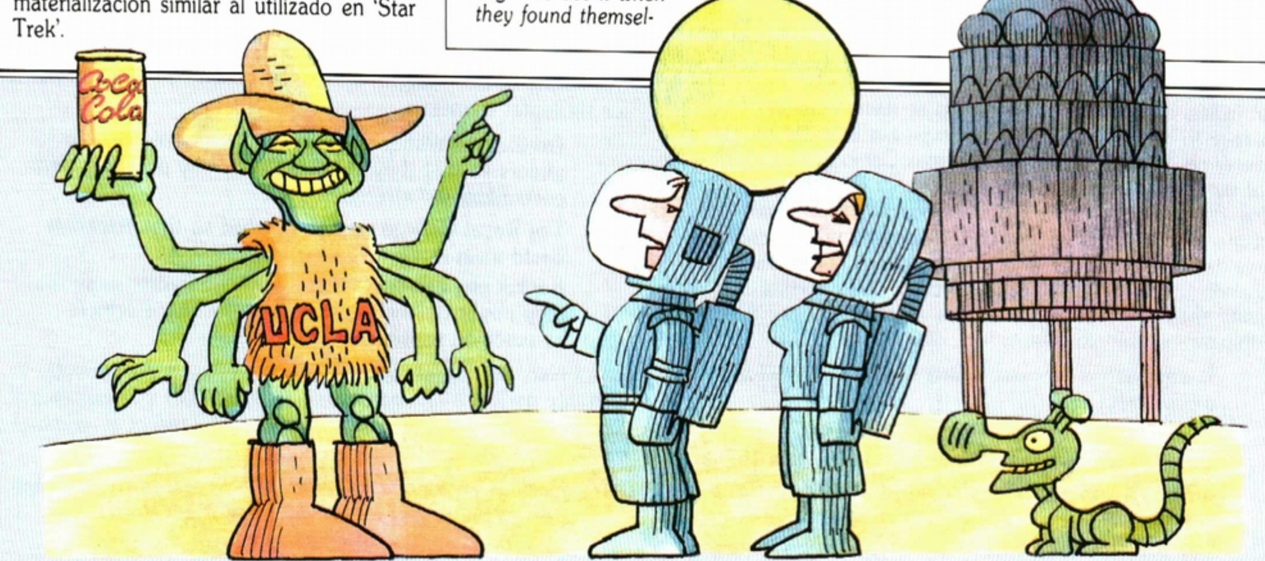
~ He's almost ready, Igor. Twenty-five years. I've waited for twenty-five years so that I might see this moment. I've worked like a slave to put together this being. I've given him the body of an athletics champion, so that he can fight for justice everywhere. I've given him the brain of a genius, so that he can work to solve mankind's problems. And I've given him the heart of a stockbroker so that he can make me rich. Igor! Are the electrodes on? ___
~ Yes, Dr Frankesheimer. ___
~ Is the radio antenna connected? ___
~ Yes, Dr Frankenheimer. ___
~ Is the molecule mixer on? ___
~ Yes, Dr Frankenheimer. ___
~ Then let's begin. ___
~ Dr Frankenheimer... ___
~ Not now, Igor! Can't you see I'm busy? ___
~ But Dr Frankenheimer... ___
~ Turn that dial! Push that button! ___
~ Why, Dr Frankenheimer? ___
~ So taht the electrical charge can come down into the electordes, you fool! Hurry up! Here it comes... ___
~ What's happening? ___
~ He's waking up! It works! It works! The body of a superman! The brain of a genius! The heart of a stockbroker! He will be the greatest creature that has ever lived! ___
~ Dr Frankenheimer... ___
~ Be quiet, Igor! Can't you see he's trying to spead? What's he saying? ___
~ Here's your next question... ___
~ What's that? ___
~ What's the capital of Ethiopia... ___
~ There's something wrong. What's happened? ___
~ That's what I wanted to tell you, Dr Frankenheimer. You see, I couldn't find the brain of a genius, so I brought you a different brain instead. ___
~ What? Whose brain? ___
~ I don't know what he was, Dr Frankenheimer, but the name on the tombstone was Rick O'Shea. ___
~ Oh, my God! No! Igor, why didn't you tell me? That idiot! ___
~ What's wrong, Dr Frankenheimer? ___
~ Don't you know who Rick O'Shea was, Igor? ___
~ No, Dr Frankenheimer. ___
~ He was the most midless game show host in the history of television! Igor, I'm going to kill you! ___
~ And here's your next question for $ 12,000, Jessica Hogbrush from Montana... ___



el cerebro de un presentador de concursos televisivos. En la segunda conversación, provista de un trasfondo musical, dos astronautas se tropiezan con un alienígena hambriento de hamburguesas y aficionado a los western. Advertirá que la graciosa criatura utiliza expresiones insólitas en un extraterrestre. Usa un par de términos tomados del western: **howdy**, que ya apareció en la Unidad 66 y que significa 'hola', y **mighty**, adverbio arcaico más bien informal que significa 'muy' o 'mucho'. También conviene citar el verbo **to beam**, 'transmitir'; el mayor Tom lo emplea acompañado de **up** para pedir a Mr Scott que los lleve a él y a su ayudante Shena a bordo de la nave, por medio de un sistema de desmaterialización similar al utilizado en 'Star Trek'.

Beam me up, Scottie

One of the most famous TV science fiction serials of recent years, if not the most famous, is Star Trek, which describes the five-year mission of the starship Enterprise to search for new planets and new life forms. The crew of the starship had a system of 'matter transfer' which they could use to 'dematerialize' themselves when they wanted to go down to the surface of planets and return to the starship. The sentence which Captain Kirk used when he wanted to return to his starship, 'Beam me up, Scottie', became extremely famous. As a result, people in general began to use it when they found themselves in particularly awkward situations which they would like to escape from as quickly as possible. There was one case of a man who found himself in a British court for a series of crimes which he had committed in business. The judge, who was extremely strict, fined him an enormous amount of money. At this, the defendant, who was still standing in the dock, simply said 'Beam me up, Scottie'. The judge, however, didn't find the remark funny, and gave the man an extra fine for contempt of court.

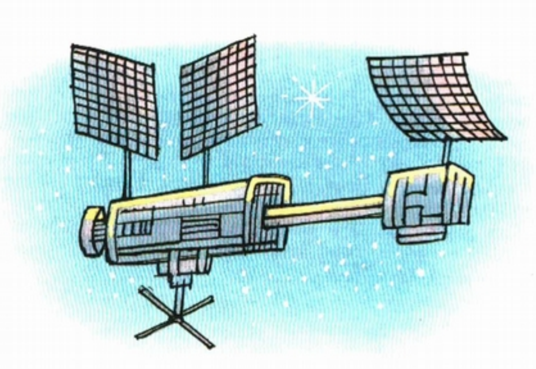


THE WONDERFUL WORLD OF THE TELLY

~ Look at that, Shena! ___
~ What is it, Major Tom? ___
~ It must be one of the inhabitants of this planet. What's he got on? ___
~ It looks like a sweatshirt. ___
~ It can't be. And what's that on his head? ___
~ It looks like a stetson. ___
~ But that's incredible. Here he comes now. ___
~ Do you think he's dangerous? ___
~ I don't know. Let's be careful, though. Put your laser gun on 'stun'. ___
~ Howdy, partner. ___
~ Err... hello. How come you speak our language? ___
~ I pick up your TV stations, boy. Mighty fine viewing, too, I must say. Especially those cowboy films. They're so good I watch them every night. ___
~ I see. Er... and the sweatshirt? ___
~ That was sent to me by my uncle the last time he visited California. ___
~ Your uncle visited California? Wasn't he noticed? ___
~ Course not, boy! He says everybody's so weird there anyhow they don't notice anything anyway. Do you have any hamburgers, son? ___
~ Er... not at the moment, no. ___
~ Well, that's a shame. Anyhow, a man's got to do what a man's got to do. I've got to get back to the TV now. Bonanza's on in five minutes. Be seeing you. ___
~ Incredible! Here we are, fifty light years from Earth, and we discover an alien life form that watches cowboy films all the time and eats junk food. What's happening to the universe, Shena? Is there no hope left for any of us? Television and hamburgers rule everything. ___
~ Now, now Major Tom, don't worry. Let's get back to the ship and I'll make you a nice cup of tea. ___
~ Oh, alright then. Beam us up, Scottie. ___

UNIT 80

Consecuencias, fines y precauciones



Oraciones consecutivas

En inglés, las oraciones de este tipo se llaman **clauses of consequence**, o bien **clauses of result**; expresan la consecuencia de lo que se ha dicho en la oración principal. Como es sabido, en español las consecutivas son anunciadas ya en la principal por adverbios como 'tan' y 'tanto', o bien por adjetivos como 'tal'. Lo mismo ocurre en inglés, donde la construcción más corriente se sirve de **such** o de **so** en la principal, y de la conjunción **that** en la subordinada. Pero en el lenguaje coloquial se omite frecuentemente **that**, y en las frases escritas es sustituido por una coma. Compare los ejemplos siguientes:

It was such a successful idea that it was used on all aircraft.

At the beginning it was so successful that its membership rose from 41 to over 200 in the 1670s.

In fact, it was so short, the photographer hardly had time to take that famous photograph.

The British felt they knew so much about aeronautics, nobody could beat them into the air.

Es importante recordar también que **such** introduce sustantivos o expresiones de cantidad como **a few, a little**; en cambio, se utiliza **so** antes de los adverbios y de los adjetivos, o bien con **much** y **many**. Existe asimismo una construcción más formal, con la locución **such that**, que introduce directamente la oración consecutiva:

The controversy was such that Darwin had real problems at times when he appeared in public.

Oraciones finales

Ya conoce algunas formas de expresar la finalidad o el fin, con la preposición **for** o las locuciones **so as** e **in order** seguidas de un verbo en infinitivo (Unidad 63).

Con **so** se construyen también oraciones finales **(clauses of purpose)** explícitas, es decir, construidas con una forma verbal temporal y, por lo tanto, con un sujeto expreso. En este caso, **so** va acompañado por la conjunción **that**.

Cuando el verbo de la principal está en pasado, en la oración final aparece a menudo un verbo modal: **shoul** o **could**, y con menos frecuencia, **would** y **might**, típicos del lenguaje formal. Confronte los siguientes ejemplos:

Orville and Wilbur made a lot of experiments with gliders so that they shouldn't have any problems with controlling the aircraft.

The Royal College was established so that scientists could meet to discuss their ideas.

Rocket engineers chose to use liquid hydrogen so that they might reduce the weight of the space vehicle as much as possible.

En cambio, cuando el verbo de la principal está en presente, en **presente perfect** o en una de las formas verbales que expresan el futuro, en la oración final se usa el **simple present** y, eventualmente, los modales **will, can** o **may:**

Rockets engineers design rockets in stages so that each part of the rocket falls away when it becomes empty.

Let's leave early so that we can get to the Science Museum for 9 o'clok.

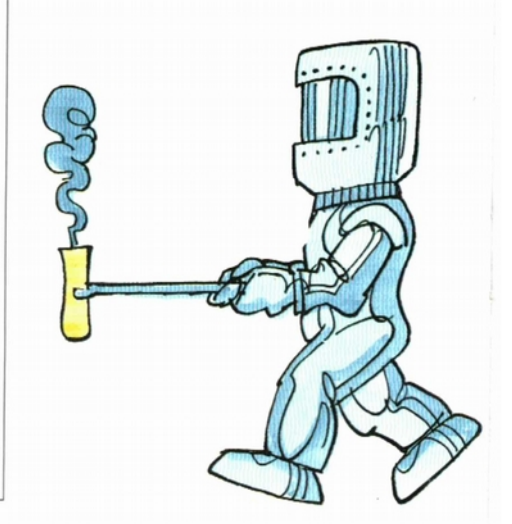
Science gets a punch on the nose

'Science', of course, is a very general term, covering a multitude of different disciplines, from economics to astrophysics, from sociology to biochemistry. It's probably not surprising, then, that the English language has often found ways of being more specific simply by putting an adjective of some description in front of the term.

'Natural science', for example, is a word that covers all the empirical sciences, as opposed to mathematics, logic and so on. 'Hard science' is a term used almost as a synonym of natural science, in order to distinguish it from 'soft science', which includes disciplines like sociology, psychology, political science and economics.

But scientists and philosophers haven't refrained from giving the various disciplines more emotional labels: 'the dismal science', for example, is economics (it was Thomas Carlyle, a Romantic writer, who first used the term).

Sometimes, expressions which might look as if they have something to do with science have nothing at all to do with it. What do you think 'the Gay Science' is, for example? It's poetry. And you might think that 'The Science' is the discipline which is considered the most important of all the sciences. You'd be wrong. It's the name given to boxing. And as if that weren't a big enough insult, some people even call boxing 'the Noble Science'. But then, fencers would probably disagree with them, because that's what they call their sport!



Diferencia entre in case e in case of

La locución **in case**, que corresponde a las expresiones españolas 'dado el caso', 'en caso de que', introduce una subordinada condicional que expresa una eventualidad en previsión de la cual es necesario tomar precauciones. Cuando depende de un verbo en pasado, el verbo de la subordinada va en **simple past**; en el lenguaje formal se construye a menudo con **should:**

He knew he dad to have as much evidence as he could in case the scientific community reacted in a hostile fashion.

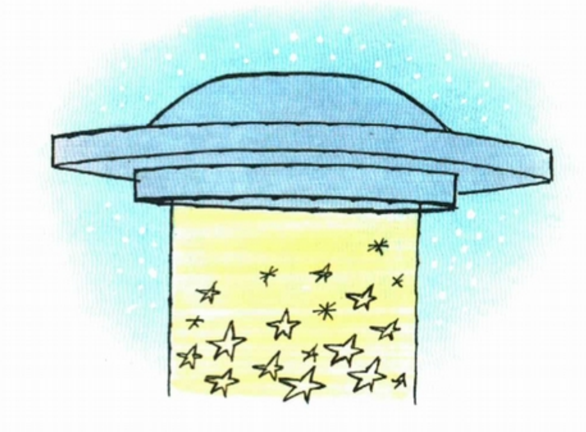
He knew he had to have as much evidence as he could in case the scientific community should react in a hostile fashion.

Aunque es muy parecida a la anterior, la locución **in case of** no puede introducir una oración sino un simple sustantivo. Aparece con frecuencia en las advertencias o en los avisos escritos:

Wallace said that, in case of doubt, the honours for the discovery should go to Darwin.

In case of emergency, dial 999.

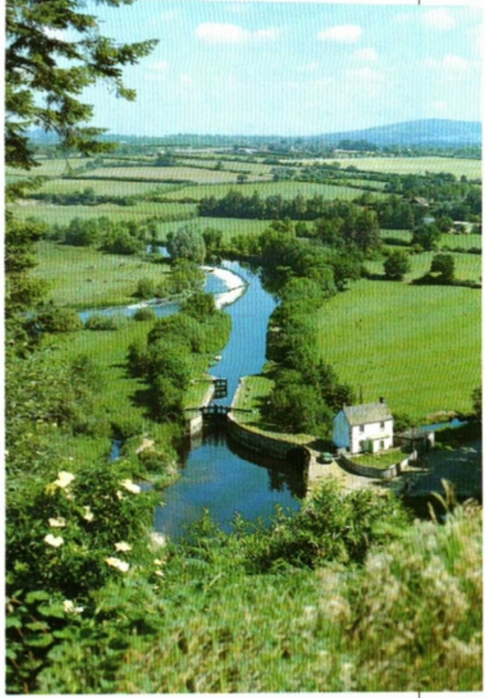
In case of fire, do not use the lift.



En esta sección ha aprendido:

- la construcción de las oraciones consecutivas y finales;
- el uso de las locuciones **in case** e **in case of**.





De una Irlanda nacieron dos

Las relaciones entre irlandeses e ingleses nunca han sido demasiado tranquilas. Ya a fines del siglo XII, la influencia del rey de Inglaterra sobre la isla vecina se había hecho opresiva. Pero la situación fue empeorando, hasta que Enrique VIII se apropió de la corona de Irlanda, imponiendo a los nuevos súbditos la reforma protestante. Desde aquel momento, la incomprensión religiosa, sumada a las diferencias sociales, alimentó luchas y enfrentamientos incesantes. Finalmente, en 1922 el gobierno de Londres pensó resolver la cuestión concediendo la independencia al sur de Irlanda y conservando el Ulster, de mayoría protestante. Como es sabido, ni siquiera así se logró la paz. En todo caso, desde 1937 la parte independiente es una república, con el antiguo nombre gaélico de Eire. En las imágenes, la luminosa campiña del Kilkenny y el castillo de Kilkenny, capital del condado.



Frankenstein, moderno Prometeo

La ciencia ficción no es un género literario demasiado antiguo: sus bases se establecieron durante el siglo XIX y principios del XX. Entre los autores que dieron vida a la novela gótica, precursora del filón terrorífico típico de la ciencia ficción, se destaca Mary Wollstonecraft Shelley (1797-1851), esposa del gran poeta romántico Percy Bysshe Shelley y autora de un famosísimo relato destinado a convertirse en la historia de horror por excelencia: «Frankenstein or the Modern Prometheus».

Del relato de Mary Shelley, escrito en 1818 con tintes más espeluznantes que la famosa versión cinematográfica, hemos escogido para usted tres de las mejores escenas. En la primera, el científico Victor Frankenstein asiste por primera vez al despertar de su criatura. Aterrorizado, huye a Suiza y se refugia en su familia. La segunda, que tiene lugar algunos años después, describe su primer encuentro real con la criatura. En la tercera escena, el infeliz mostruo, después de un largo monólogo en el que relata sus vivencias desde su nacimiento hasta aquel momento, hace una singular petición a su creador: para poner fin a una vida de dolorosa soledad, suplica a Frankenstein que cree una compañera similar a él en todo.

En las fotos, un retrato de la autora y dos escenas tomadas de la película «The Bride of Frankenstein», realizada por James Whale en 1931.

It was on a dreary[1] night of November that I beheld the accomplishment of my toils[2]. I collected the instruments of life[3] around me, that I might infuse a spark of being[4] into the lifeless[5] thing that lay[6] at my feet. It was already one in the morning; the rain pattered dismally against the panes[7], and my candle[8] was nearly burnt out[9], when, by the glimmer of the half-extinguished light[10], I saw the dull[11] yellow eye of the creature open; it breathed hard, and a convulsive motion[12] agitated its limbs[13].

How can I describe my emotions at this catastrophe, or how delineate the wretch[14] whom[15] with such infinite pains[16] and care I had endeavoured[17] to form? His limbs were in proportion[18], and I had selected his features as beautiful[19]. Beautiful! – Great God! His yellow skin scarcely covered the work of muscles and arteries beneath[20]; his hair was of a lustrous[21] black, and flowing[22]; his teeth of a pearly[23] whiteness; but these luxuriances[24] only formed a more horrid[25] contrast with his watery eyes, that seemed almost of the same colour as the dun[26] white sockets[27] in which they were set[28], his shrivelled complexion[29] and straight black lips. The different accidents[30] of life are not so changeable[31] as the feelings of human nature. I had worked hard for nearly two years, for the sole purpose of infusing life into an inanimate body[32]. For this I had deprived[33] myself of rest and health[34]. I had desired[35] it with an ardour[36] that far exceeded moderation[37]; but now that I had finished, the beauty of the dream vanished[38], and breathless horror and disgust filled my heart. [...]

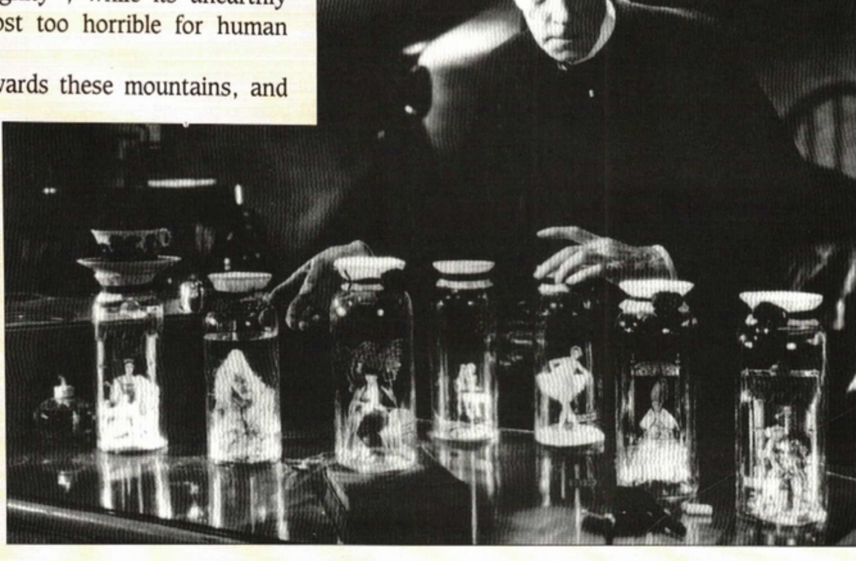


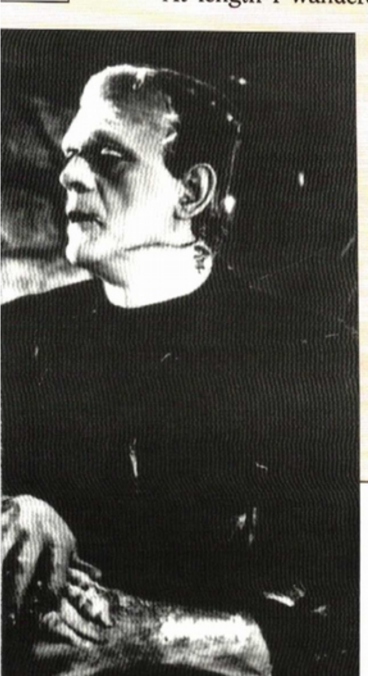
1. **Dreary:** melancólica.
2. **I beheld the accomplishment of my toils:** vi el resultado de mi trabajo. **Beheld** es el pasado de **to behold**, un verbo literario y algo arcaico que significa «observar».
3. **I collected the instruments of life:** recogí los instrumentos de la vida. Victor Frankenstein se refiere a los utensilios que ha empleado para dar vida al monstruo.
4. **That I might infuse a spark of being:** a fin de infundir una chispa de vida. En este contexto, **that** introduce una proposición final similar a las que se han analizado en esta Unidad.
5. **Lifeless:** sin vida. **Less** es un sufijo privativo muy común en inglés.
6. **Lay:** yacía.
7. **Pattered dismally against the panes:** golpeaba tristemente los cristales.
8. **Candle:** vela.
9. **Burnt out:** apagada.
10. **By the glimmer of the half-extinguished light:** al tenue resplandor de la luz casi apagada.
11. **Dull:** apagado.
12. **Convulsive motion:** movimien-

I suddenly beheld the figure of a man, at some distance, advancing towards me with superhuman speed[39]. He bounded over the crevices[40] in the ice, among which I had walked with caution[41]; his stature, also, as he approached[42], seemed to exceed that of man. I was troubled[43]; a mist came over my eyes[44], and I felt a faintness seize me[45]; but I was quickly restored[46] by the cold gale of the mountains. I perceived[47], as the shape[48] came nearer (sight tremendous and abhorred[49]!), that it was that wretch whom I had created. I trembled with rage[50] and horror, resolving[51] to wait his approach, and then close[52] with him in mortal combat[53]. He approached; his countenance bespoke bitter anguish[54], combined with disdain and malignity[55], while its unearthly ugliness rendered it[56] almost too horrible for human eyes. [...]

At length I wandered[57] towards these mountains, and have ranged[58] through their immense recesses[59], consumed[60] by a burning passion which you alone can gratify[61].

We may not part[62] until you have promised to comply with my requisition[63]. I am alone, and miserable; man will not associate with me; but one as deformed and horrible as myself would not deny herself to me[64]. My companion[65] must be of the same species, and have the same defects[66]. This being you must create.





to convulsivo.
13. **Limbs:** miembros.
14. **Delineate the wretch:** describir al desventurado.
15. **Whom:** que, el cual.
16. **Pains:** esfuerzos.
17. **Endeavoured:** buscado.
18. **In proportion:** proporcionados.
19. **I had selected his features as beautiful:** había escogido sus rasgos, considerándolos bellos.
20. **Scarcely covered the work of muscles and arteries beneath:** apenas recubría el conjunto de músculos y arterias subyacentes.
21. **Lustrous:** brillante.
22. **Flowing:** lacios.
23. **Pearly:** perlado.
24. **Luxuriances:** toques de lujo.
25. **Horrid:** horrendo.
26. **Dun:** apagados.
27. **Sockets:** órbitas.
28. **Set:** colocados.
29. **Shrivelled complexion:** piel del rostro arrugada.
30. **The different accidents:** los diversos acontecimientos.
31. **Changeable:** variable.
32. **The sole purpose of infusing life into an inanimate body:** con el único propósito de infundir vida a un cuerpo inanimado.
33. **Deprived:** privado.
34. **Rest and health:** descanso y salud.
35. **Desired:** deseado.
36. **Ardour:** ardor.
37. **Far exceeded moderation:** iba más allá de la moderación.
38. **The beauty of the dream vanished:** la belleza del sueño se desvaneció.
39. **Advancing towards me with superhuman speed:** que avanzaba hacia mí a una velocidad sobrehumana.
40. **Bounded over the crevices:** saltaba las grietas.
41. **Caution:** cautela.
42. **Approached:** avanzaba.
43. **Troubled:** turbado.
44. **A mist came over my eyes:** se me nubló la vista.
45. **I felt a faintness seize me:** me invadió una sensación de desvanecimiento.
46. **Restored:** restaurado.
47. **I perceived:** me di cuenta.
48. **Shape:** silueta.
49. **Sight tremendous and abhorred:** visión tremenda y horrible.
50. **I trembled with rage:** temblé de rabia.
51. **Resolving:** decidiendo.
52. **Close:** emprender.
53. **Mortal combat:** combate mortal.
54. **His countenance bespoke bitter anguish:** su aspecto revelaba una angustia amarga.
55. **Combined with disdain and malignity:** combinada con desprecio y maldad.
56. **Its unearthly ugliness rendered itd:** su fealdad inhumana lo hacía.
57. **At length I wandered:** por último, vagabundeé. A partir de este momento es el monstruo quien habla.
58. **Ranged:** vagado.
59. **Recesses:** cavidad.
60. **Consumed:** consumido.
61. **You alone can gratify:** sólo tú puedes satisfacer.
62. **We may not part:** no podemos separarnos.
63. **To comply with my requisition:** satisfacer mi petición.
64. **Would not deny herself to me:** no se me puede negar.
65. **Companion:** compañero; se entiende que es del sexo femenino.
66. **Defects:** defectos.



aeronautics	aeronáutica
aircraft	avión, aviones
alien	extraño, alienígena
amateur	aficionado
banking	inclinación de un avión cuando vira
(to) beam	transmitir
being	ser
(to) bend	plegar
bishop	obispo
breeding program	programa de reproducción (USA)
closely	de cerca
(to) collect	recoger
(to) compare	comparar
contemporaneous	contemporáneo
controversial	controvertido, discutible
controversy	controversia
(to) develop	desarrollar
(to) devote	dedicar
dial	cuadrante
discovery	descubrimiento
edge	borde
electrical charge	carga eléctrica
electrode	electrodo
(to) encounter	encontrar
enquiry	búsqueda
evolution	evolución
(to) experiment	experimentar
explorer	explorador
(to) fal away	caer
fashion	moda
fuel	carburante
(to) get the better of	prevalecer sobre
glider	planeador
gravitational pull	fuerza de gravedad
(to) guess	suponer
hall	salón
heavier-than-air	más pesado que el aire
(to) highlight	evidenciar
hostile	hostil
hydrogen	hidrógeno
inhabitant	habitante
junk food	alimento envasado y poco nutritivo
lecture	conferencia
leight year	año luz
(to) look into	estudiar, profundizar
lunar module	módulo lunar
manoeuvre	maniobra
membership	conjunto de socios
midless	estúpido
molecule	molécula
monster	monstruo
naturalist	naturalista
oddly	raramente, extrañamente
outer space	espacio exterior
(to) paraphrase	parafrasear
patent	patente
(to) pick up	coger, levantar
pretty	muy
priest	sacerdote
(to) promote	promover
(to) provoke	provocar
reclutant	reacio
(to) require	requerir
rolling	rodar
royal charter	carta de privilegio real
scientific community	comunidad científica
search	búsqueda, investigación
setting	ambiente, ambientación
(to) shape	formar
(to) show round	guiar, enseñar
(to) solve	resolver
stability	estabilidad
stage	fase de un cohete
statement	declaración
stetson, Stetson	sombrero de hombre, de ala ancha y copa alta
(to) stick to something	mantenerse fiel a algo
(to) stun	aturdir
(to) sum up	resumir
tombstone	lápida
unstable	inestable
virtually	prácticamente
weird	muy extraño





Synonyms and antonyms

En esta Unidad ha aparecido un verbo que quizá lo ha dejado un poco perplejo: ***to encounter****. Ciertamente, no resulta difícil traducirlo, porque se parece bastante al español. Pero como ya sabe, existe otro verbo que corresponde al español «encontrar»: se trata de* ***to meet****. ¿Hay alguna diferencia entre los dos? Sin duda.*

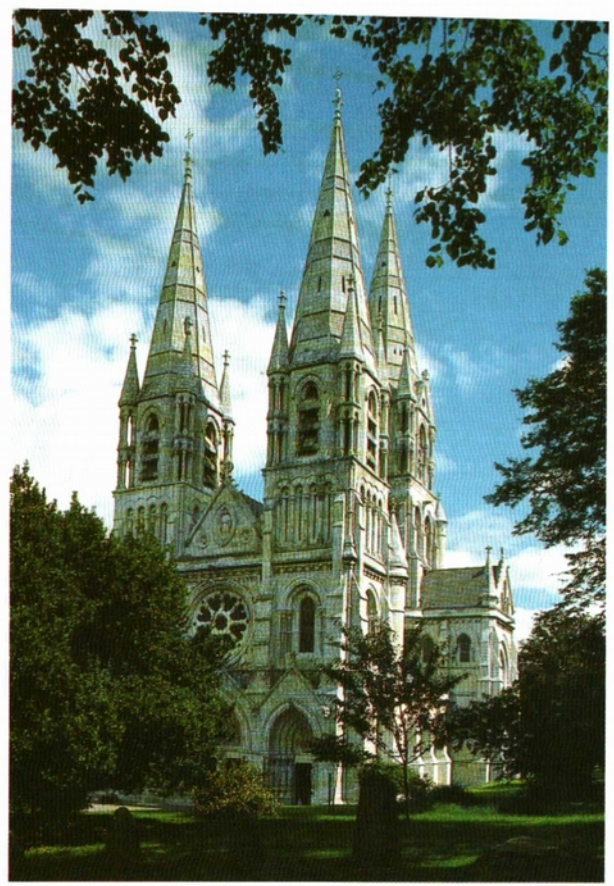
To encounter *se utiliza sobre todo para referirse a algo negativo, como por ejemplo un problema:* ***The Wrights encountered enormous problems when they built their first gliders****. También se puede usar en el caso de un encuentro inesperado:* ***I encountered Dr Frankenheimer at the conference on brain transplants.***

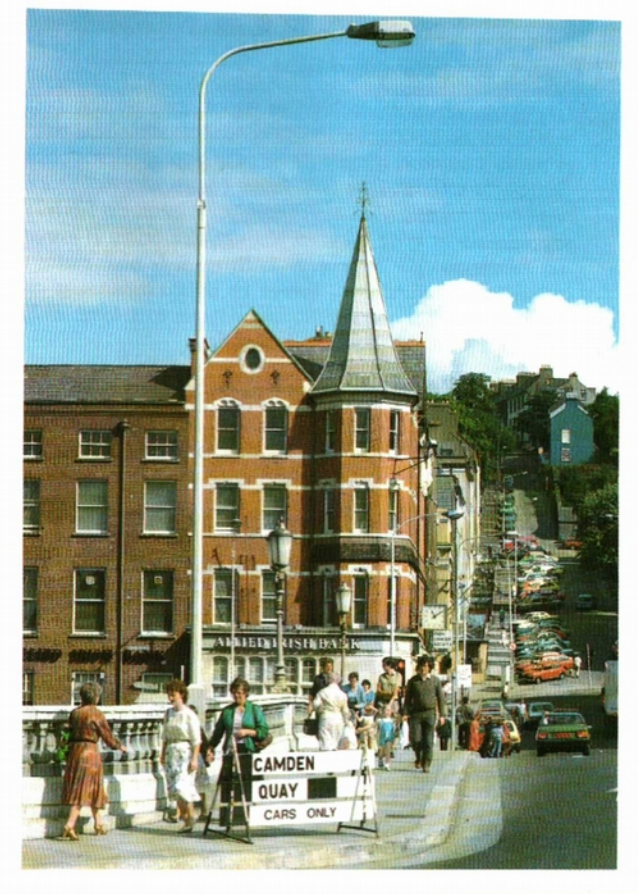
To meet*, en cambio, tiene muchos significados. Se puede utilizar con la acepción que tiene* ***to encounter*** *en el último ejemplo, y asimismo para referirse a un encuentro programado con anterioridad:* ***I arranged to meet Igor at the graveyard.*** *También puede ser útil para hacer presentaciones y para hablar del momento en que dos personas se han conocido:* ***I'd like you to meet Luke Highwalker, a cousin of mine from the planet Halloween; Didn't we meet at the Venusian ambassador's 235th birthday party?***

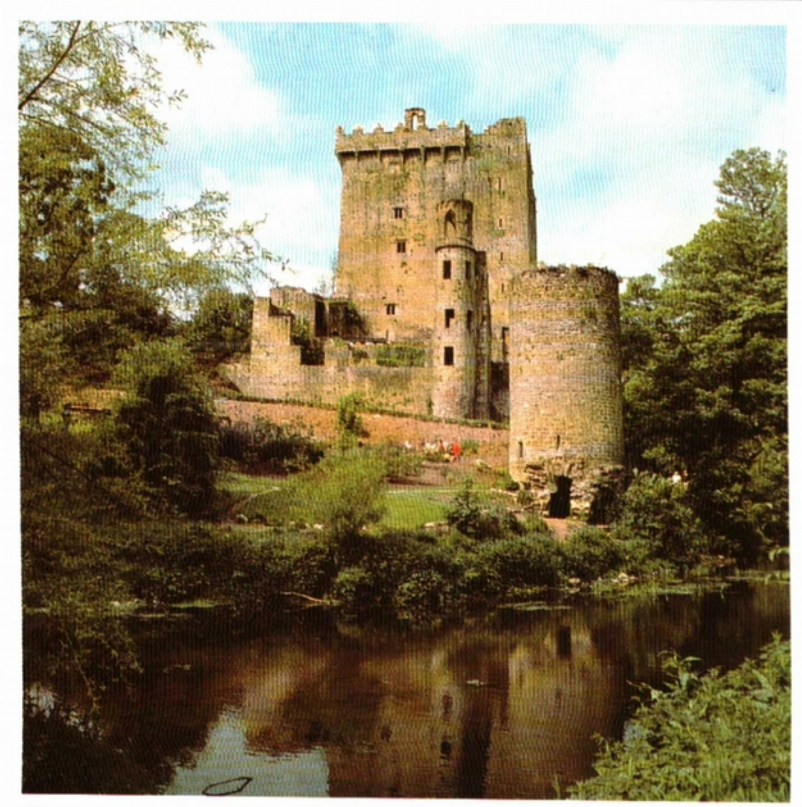


Cork, Cobh y sus catedrales

La ciudad de Cork (foto inferior derecha), la segunda de Eire después de la capital, Dublín, es la capital del condado homónimo. Se extiende por ambos márgenes del río Lee, en el fondo de un profundísimo fiordo que desemboca en el Canal de San Jorge. El primer establecimiento del lugar fue un monasterio erigido entre los siglos VI y VII, en la isla fluvial que todavía hoy constituye el centro de la ciudad. Cork se mantuvo durante muchos siglos en una posición marginal, hasta que recibió un decisivo impulso en el siglo XVIII a raíz del nacimiento de la industria del vidrio. Actualmente es sede de diversas actividades industriales y de un activo puerto comercial. Cerca de Cork se encuentra otra ciudad portuaria, Cobh, dominada por la catedral católica de St. Colman (foto de al lado), que es casi una réplica de la catedral protestante (foto inferior izquierda) de Cork.







El Ulster sin seis condados

La división administrativa de Eire respeta, con algunos ajustes, la organización tradicional de Irlanda. Veintisiete condados administrativos, frente a los veintiséis históricos, componen las cuatro grandes provincias: Munster, Leinster, Connaught y Ulster. Pero esta última abarca sólo tres de los nueve condados originarios; los seis restantes constituyen Irlanda del Norte. El condado más vasto del sur es el de Cork, en Munster, que ocupa el extremo meridional de la isla. Atravesado por los montes de Kerry, tiene unas costas muy irregulares cortadas por profundísimas bahías. En la foto superior, el castillo de Blarney, del siglo XII, en el que destaca una singular casa-torre; en la foto inferior, paisaje de los alrededores de Bounty Bay.





Exercise 1

En esta sopa de letras están escondidos los nombres de diez disciplinas científicas. Pueden estar dispuestos horizontalmente, verticalmente o en diagonal.

f	k	c	h	e	m	i	s	t	r	y	g
m	i	n	e	r	a	l	o	g	y	f	h
z	q	u	z	o	t	l	o	b	j	w	s
w	s	e	h	e	h	a	s	i	r	o	a
g	t	c	d	g	e	o	l	o	g	y	s
s	l	o	b	a	m	d	p	l	q	o	t
r	t	l	t	o	a	t	g	o	s	e	r
j	q	o	j	d	t	t	h	g	s	x	o
v	h	g	l	y	i	a	r	y	w	x	n
p	h	y	s	i	c	s	n	p	t	d	o
k	p	r	w	z	s	n	u	y	w	p	m
a	n	t	h	r	o	p	o	l	o	g	y

Exercise 2

Las siguientes definiciones describen algunos términos citados en esta Unidad. Léalas atentamente y trate de descubrir los vocablos a los que se refieren.

a) **To examine something in relation to something else.**
b) **Rather.**
c) **All the members of a club or a society.**
d) **Very.**
e) **To bring to a more complete or advanced state.**
f) **To point to as being something important.**
g) **The place where something happens.**
h) **The official right to make or sell something, usually shown in a document.**
i) **To be able to hear or receive.**
j) **The place where something begins or ends and is farthest from the centre.**

Exercise 3

Transforme las siguientes frases utilizando **so... that** o **such... that**:

a) **A result of the success of this idea was that it was used on all aircraft right up to the beginning of the First World War.**

b) **The flight was very short. As a result, the photographer was hardly able to take his famous photograph.**

c) **The British felt they knew a lot about aeronautics. As a result, they felt that nobody could beat then into the air.**

d) **Many of the gliders that had been built up to this point were very unstable. As a result, many people had lost their lives.**

e) **Oppenheimer was very interested in Oriental poetry at that time. As a result, the first thing that came into his mind when the first nuclear bomb exploded was a line by a Chinese poet.**

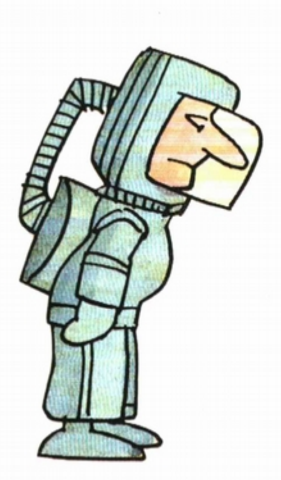
f) **Copernicus was very scared about official reactions to his theories. As a result, he didn't publish them until 1543, the year of his death.**

g) **Galileo's ideas were very revolutionary. As a result, the Pope put him on trial.**

h) **Majorana was a very good mathematician. As a result, Fermi asked him to join his team.**

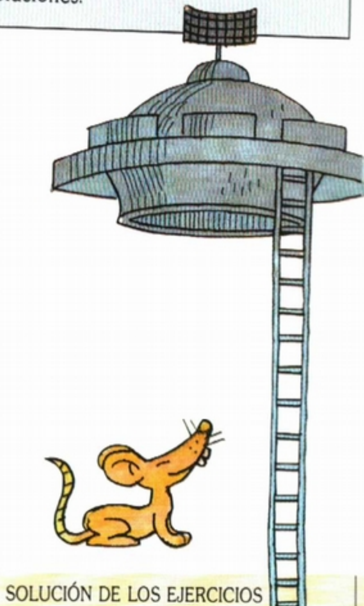
i) **Atoms are extremely small. As a result, they are impossible to see without a microscope.**

j) **Mercury is a very hot planet. As a result, nobody can ever go there.**



Exercise 4

Este ejercicio es un dictado tomado de la sección Reading. Escuche toda la grabación, luego vuelva a escucharla y transcriba el fragmento aparte. Después confronte lo que ha escrito con el texto que figura en las soluciones.



Exercise 5

Una estas parejas de frases utilizando **so that:**

a) **Rocket engineers design rockets in stages. They do this to save weight.**

b) **Rocket engineers chose to use liquid hydrogen. They did this to reduce the weight of the space vehicle.**

c) **A space vehicle has to escape the Earth's gravitational pull. To do this, it has to reach a speed of 22,500 miles per hour.**

d) **Pressure has to be released from inside the Earth's crust. To do this, volcanic eruptions and earthquakes take place.**

e) **Kepler wanted information about the movements of the planets. To obtain this, he went to visit Tycho Brahe.**

f) **J.J. Thompson wanted to investigate atoms. To do this, he sent a stream of electricity throught a cathode ray tube.**

g) **Rutherford wanted to investigate atoms. To do this, he sent alpha particles throught a piece of gold.**

h) **Michelson and Morley wanted to test Einstein's theory of relativity. To do this, they measured the position of a star during an eclipse.**

SOLUCIÓN DE LOS EJERCICIOS

Exercise 1

He aquí la solución de la sopa de letras:

```
f k c h e m i s t r y g
m i n e r a l o g y f h
z q u z o t l o b j w s
w s e h e h a s i r o a
g t c d g e o l o g y s
s l o b a m d p l q o t
r t l t o a t g o s e r
j q o j d t t h g s x o
v h g l y i a r y w x n
p h y s i c s n p t d o
k p r w z s n u y w p m
a n t h r o p o l o g y
```

Exercise 2

a) **to compare.** b) **pretty.** c) **membership.** d) **mighty.** e) **to develop.** f) **to highlight.** g) **setting.** h) **patent.** i) **to pick up.** j) **edge.**

Exercise 3

a) **This idea was so successful that it was used on all aircraft right up to the beginning of the First World War** o **It was such a successful idea that it was used on all aircraft...** b) **The flight was so short that the photographer was hardly able to take his famous photograph** o **It was such a short fligh that the photopraphes...** c) **The British felt they knew so much about aeronautics that nobody could beat them into the air.** d) **Many of the gliders that had been built up to this point were so unstable that many people had lost their lives.** e) **Oppenheimer was so interested in Oriental poetry at that time that the first thing that came into his mind when the first nuclear bomb exploded was a line by a Chinese poet.** f) **Copernicus was so scared about official reactions to his theories that he didn't publish them until 1543, the year of his death.** g) **Galileo's ideas were so revolutionary that the Pope put him on trial.** h) **Majorana was such a good mathematician that Fermi asked him to join his team.** i) **Atoms are so small that they are impossible to see without a microscope.** j) **Mercury is such a hot planet that nobody can ever go there** o **Mercury is so hot that...**

Exercise 4

He aquí el texto del dictado: **I suddenly beheld the figure of a man, at some distance, advancing towards me with superhuman speed. He bounded over the crevices in the ice, among which I had walked with caution; his stature, also, as he approached, seemed to exceed that of man. I was troubled: a mist came over my eyes, and I felt a faintness seize me.**

Exercise 5

a) **Rocket engineers design rockets in stage so that they can save weight.** b) **Rocket engineers chose to use liquid hydrogen so that they could reduce the weight of the space vehicle.** c) **So that a space vehicle can escape the Earth's gravitational pull, it has to reach a speed of 22,500 miles per hour.** d) **So that pressure can be (o is) released from inside the Earth's crust, volcanic eruptions and earthquakes take place.** e) **Kepler went to visit Tycho Brahe so that he could (o might) obtain information about the movements of the planets.** f) **So that he could (o might) investigate atoms, J.J. Thompson sent a stream of electricity through a cathode ray tube.** g) **So that he could (o might) investigate atoms, Rutherford sent alpha particles through a piece of gold.** h) **So that they could (o might) test Einstein's theory of relativity, Michelson and Morley measured the position of a star during an eclipse.**



Todos los campos, cercados

El aspecto del paisaje agrario irlandés refleja claramente los acontecimientos de su pasado. La costumbre de repartir las propiedades territoriales entre los hijos a partes iguales se remonta al sistema tribal, y se opone a la tradición feudal, que transmite la propiedad territorial al primogénito. De este modo, las grandes fincas agrícolas irlandesas se fueron subdividiendo en porciones cada vez menores, delimitadas por esos bajos muros de piedra que aún diseñan el campo. Otra consecuencia también muy visible es la escasez de centros habitados, dado que la mayor parte de la población ha seguido dedicándose a la agricultura y vive en pequeñas granjas. En las imágenes, campos cultivados en el condado de Donegal.



